

1. (Three Times Amended) A camera comprising:

a physical element, arranged in a photographing optical system, that can change light transmission factor throughout said physical element;

photoelectric conversion means for receiving an optical image transmitted through said physical element at a position of an imaging plane, and for converting the optical image into an electrical image signal;

memory means for storing correcting information for correcting a change in an optical characteristic of said physical element with respect to a change of the light transmission factor throughout said physical element; and

control means for (i) correcting the electrical image signal output from said photoelectric conversion means using the correcting information read out from said memory means corresponding to the light transmission factor throughout said physical element, to correct the change in the optical characteristic of the physical element, and (ii) controlling drive of said physical element according to the corrected electrical image signal.

2. A camera according to claim 1, wherein said control means adjusts a stored correction amount of wavelength dependency characteristics of the light transmission factor.

3. A camera according to claim 1, wherein said control means corrects said change by auto white-balance control for an output signal from said photoelectric conversion means.

4. A camera according to claim 1, wherein said control means corrects said change by changing a sensitivity of said photoelectric conversion means in accordance with a light wavelength.

5. A camera according to claim 4, wherein said control means corrects said change by a filter provided with one of said photographing optical system and said photoelectric conversion means.

6. A camera according to claim 1, wherein said control means corrects said change by arranging another physical element capable of controlling a light transmission factor in the photographing optical system.

7. A camera according to claim 1, wherein said control means comprises storage means for storing at least one of the light transmission factor wavelength dependency of said physical element and the correction amount of the light transmission factor wavelength dependency of said physical element.

8. A video camera according to claim 7, wherein said storage means stores at least one of a plurality of light transmission factor wavelength dependencies and a plurality of correction amounts in accordance with at least one of the light transmission factor and the light transmission amount of said physical element.

9. (Twice Amended) A camera comprising:

a physical element that can change a light transmission factor throughout said physical element;

photoelectric conversion means for receiving an optical image transmitted through said physical element at a position of an imaging plane, for converting the optical image into an electrical image signal, and capable of adjusting at least one of a light accumulation time and a sensitivity;

memory means for storing correcting information for correcting a change in an optical characteristic of said physical element with respect to a change of the light transmission factor throughout said physical element;

correcting means for correcting the electrical image signal output from said photoelectric conversion means using the correcting information read out from said memory means corresponding to the light transmission factor throughout said physical element, to correct the change in the optical characteristic of the physical element; and

exposure amount adjustment means for controlling an exposure amount by a combination of adjusting at least one of the light transmission factor and the light transmission amount of said physical element according to the electrical image signal corrected by said correcting means, and adjusting at least one of the light accumulation time and the sensitivity of said photoelectric conversion means.

10. A video camera according to claim 9, wherein said exposure amount adjustment means electrically adjusts at least one of the light transmission factor and the light transmission amount of said physical element.